FIG.1

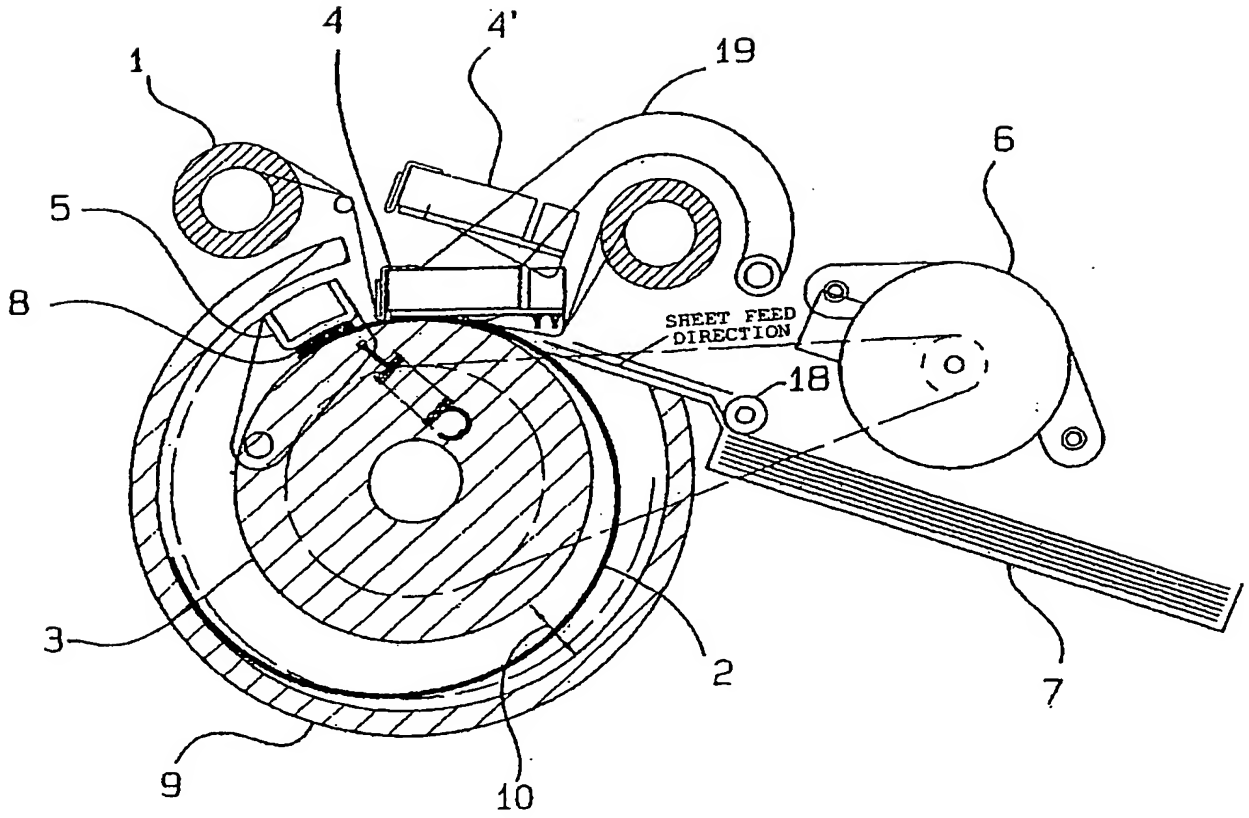


FIG.2

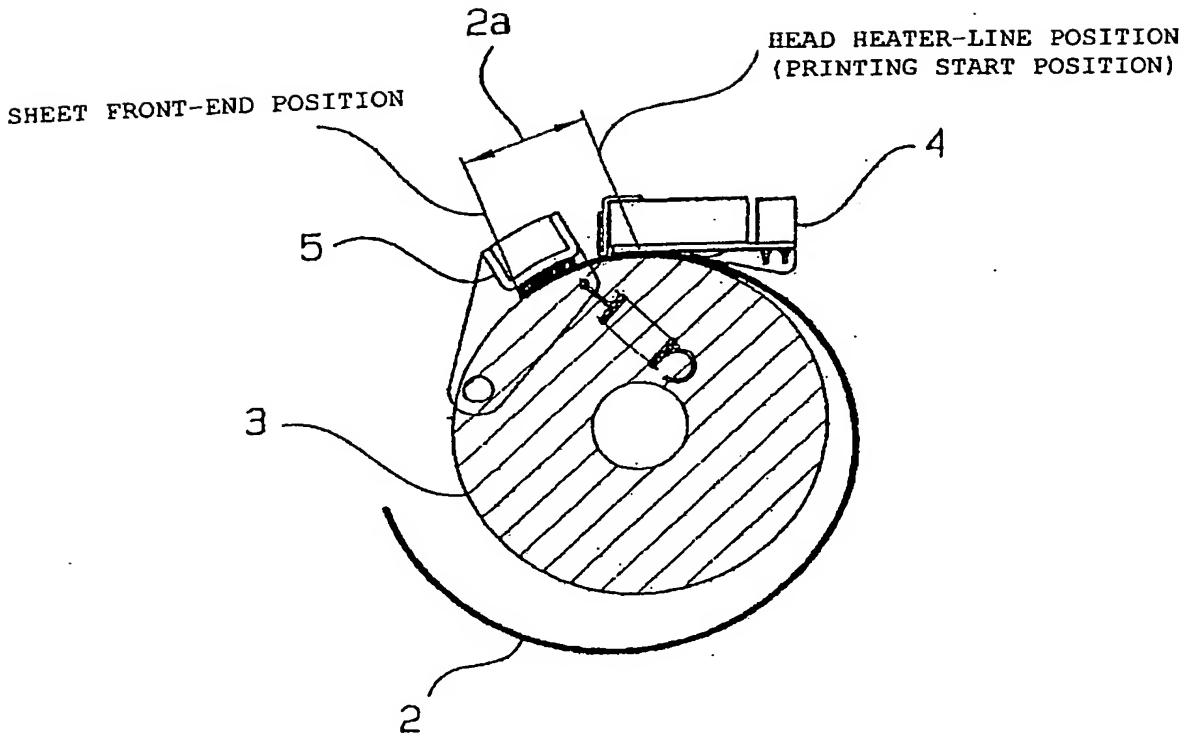

2a
HEAD HEATER-LINE POSITION
(PRINTING START POSITION)
SHEET FRONT-END POSITION
4
5
3
2

FIG.3

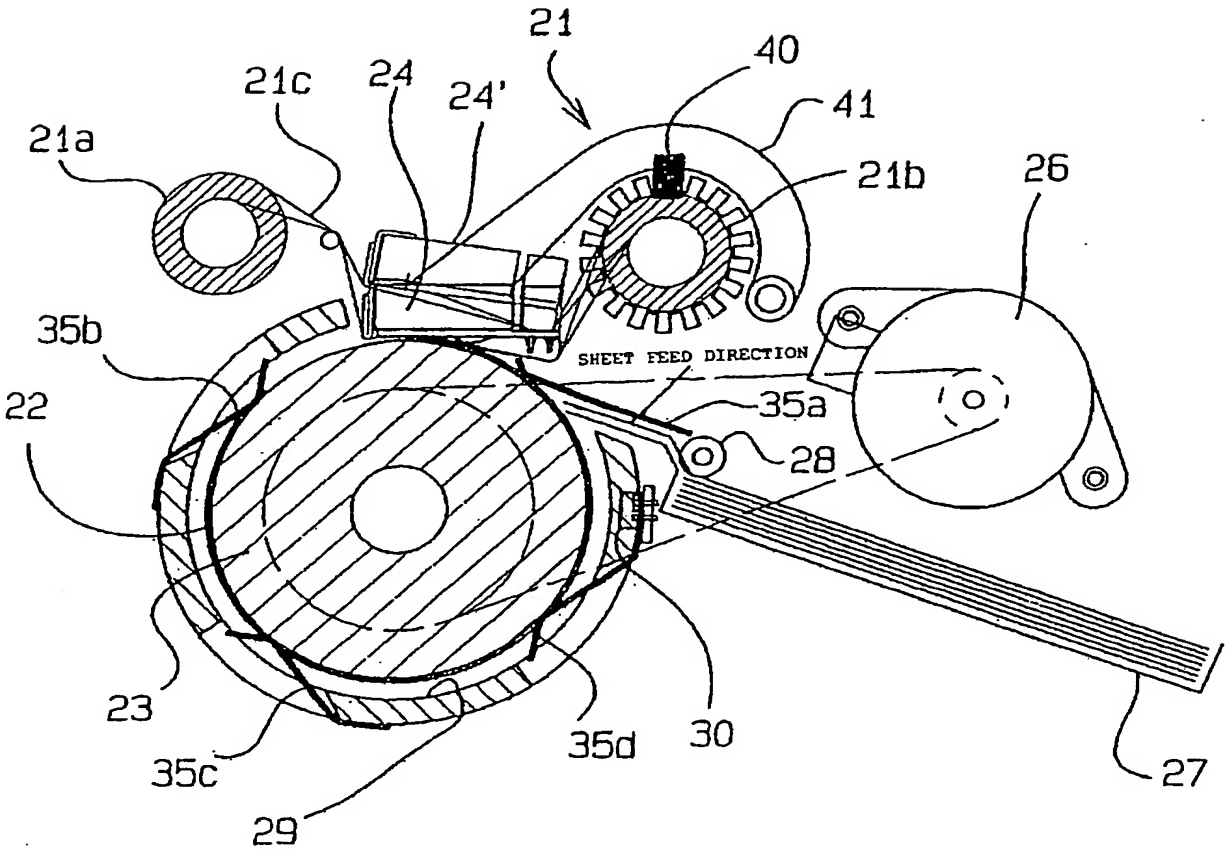

21
40
41
21c
24
24'
21a
21b
26
35b
SHEET FEED DIRECTION
22
35a
28
23
35c
29
35d
30
27

FIG.4

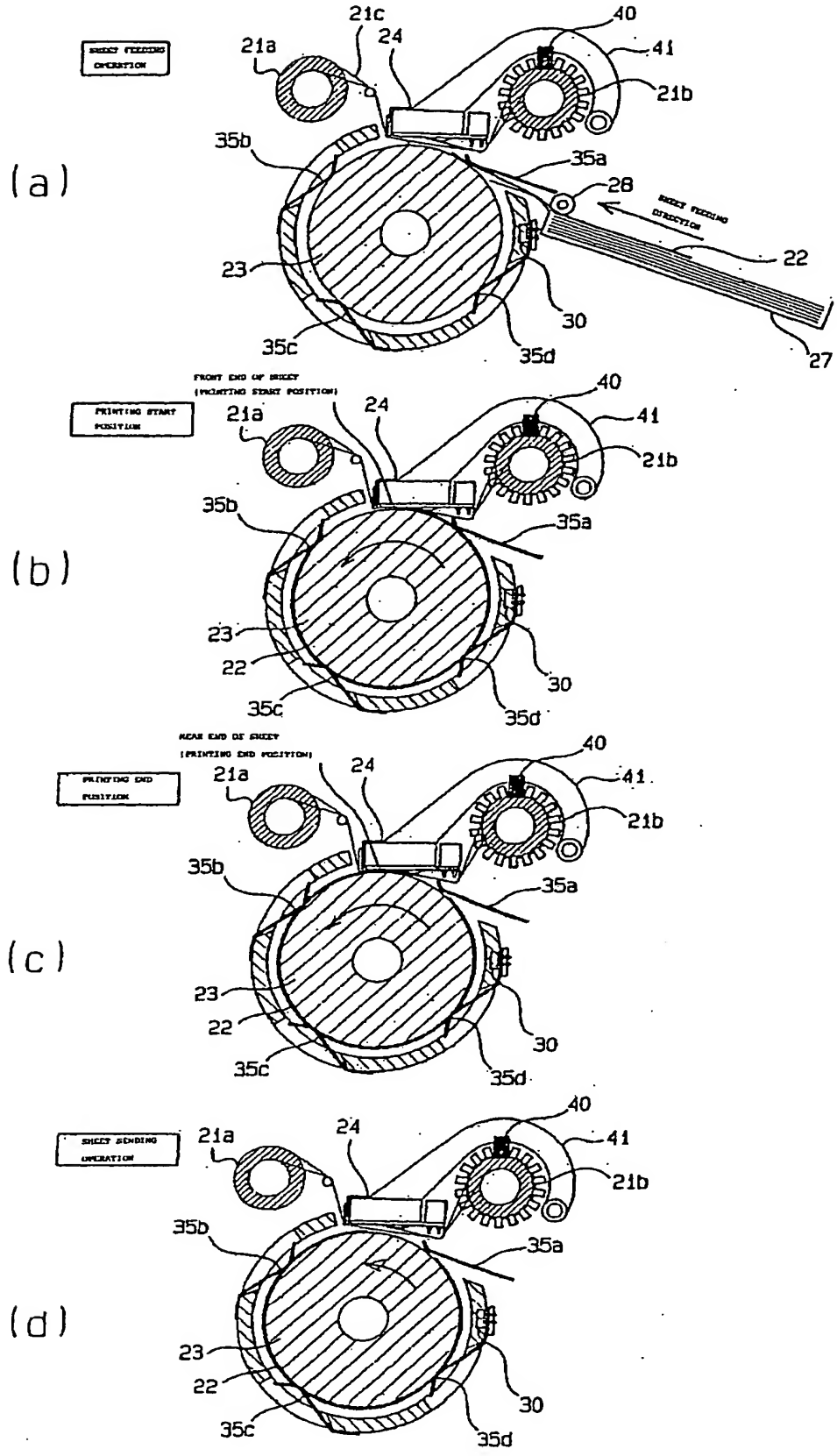

(a)
SHEET FEEDING OPERATION
21c
24
21a
40
41
21b
35b
35a
28
SHEET FEEDING DIRECTION
22
23
30
35c
35d
27
(b)
FRONT END OF SHEET (PRINTING START POSITION)
PRINTING START POSITION
21a
24
40
41
21b
35b
35a
23
22
30
35c
35d
(c)
REAR END OF SHEET (PRINTING END POSITION)
PRINTING END POSITION
21a
24
40
41
21b
35b
35a
23
22
30
35c
35d
(d)
SHEET SENDING OPERATION
21a
24
40
41
21b
35b
35a
23
22
30
35c
35d

FIG.5

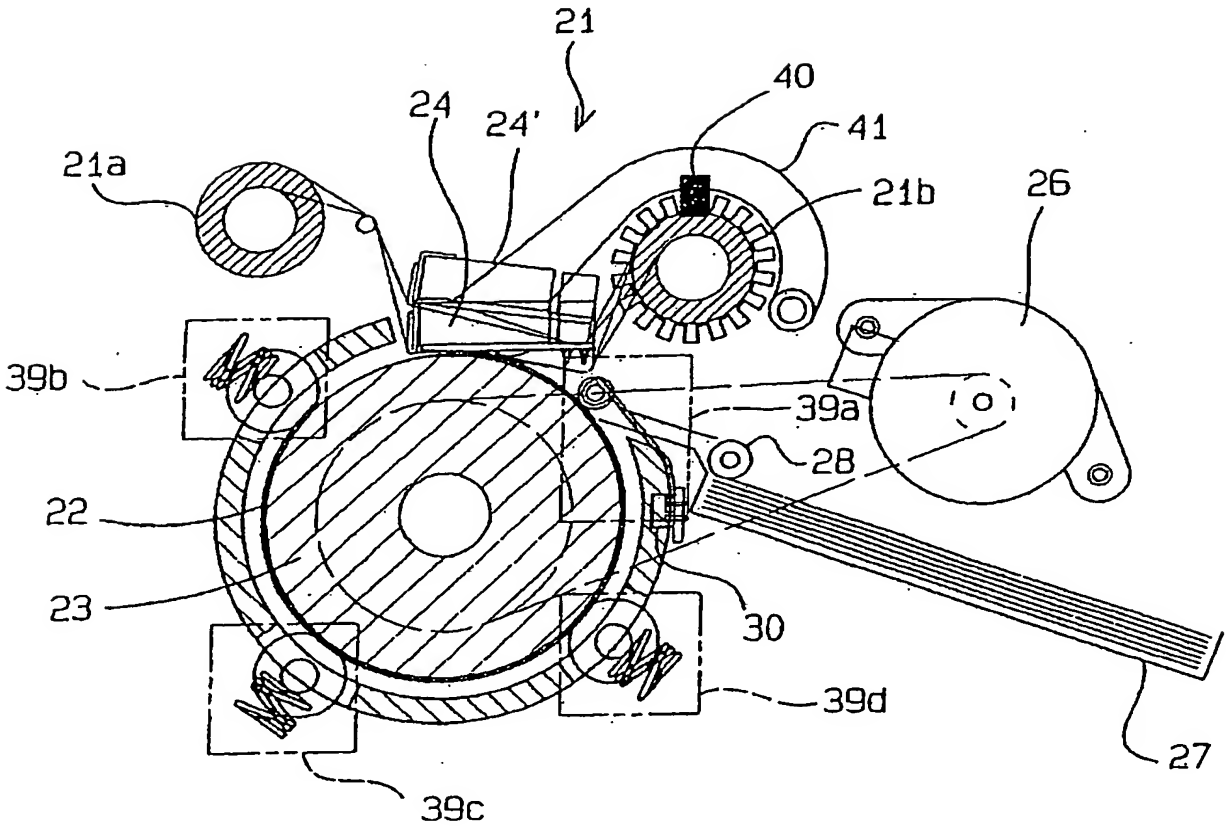


FIG.6

RELATIONSHIP BETWEEN FRICTION COEFFICIENT RATIO, NUMBER OF PRINTED SHEETS, AND PRINT RESIST DEVIATION

FRICTION COEFFICIENT RATIO (%) %	FIRST PRINTED SHEET μm	TWENTY-FIFTH PRINTED SHEET μm	FIFTIETH PRINTED SHEET μm	ALLOWABLE DEVIATION μm
10	0	15	40	75
30	5	20	60	75
50	30	50	120	75

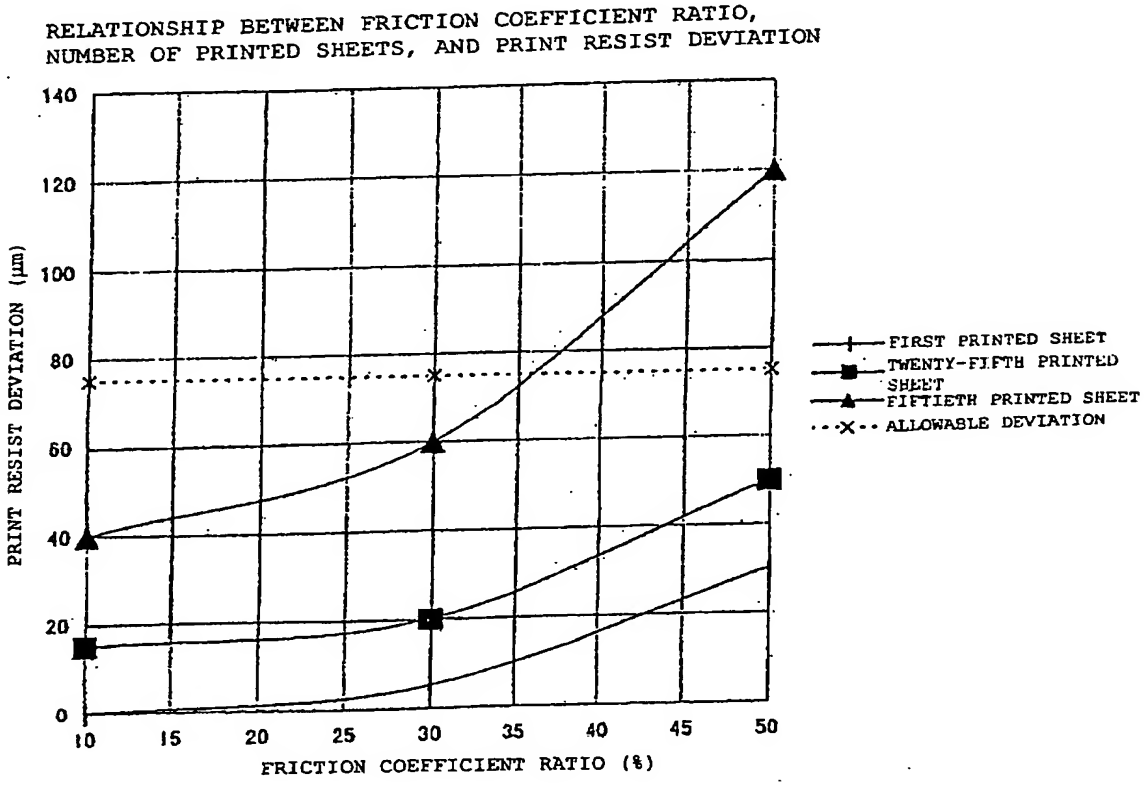


FIG.7

RELATIONSHIP BETWEEN PLATEN-DRUM WINDING ANGLE, NUMBER OF PRINTED SHEETS, AND PRINT RESIST DEVIATION

PLATEN-DRUM WINDING ANGLE deg	FIRST PRINTED SHEET μm	TWENTY-FIFTH PRINTED SHEET μm	FIFTIETH PRINTED SHEET μm	ALLOWABLE DEVIATION μm
45	20	60	120	75
90	5	20	60	75
135	0	10	40	75

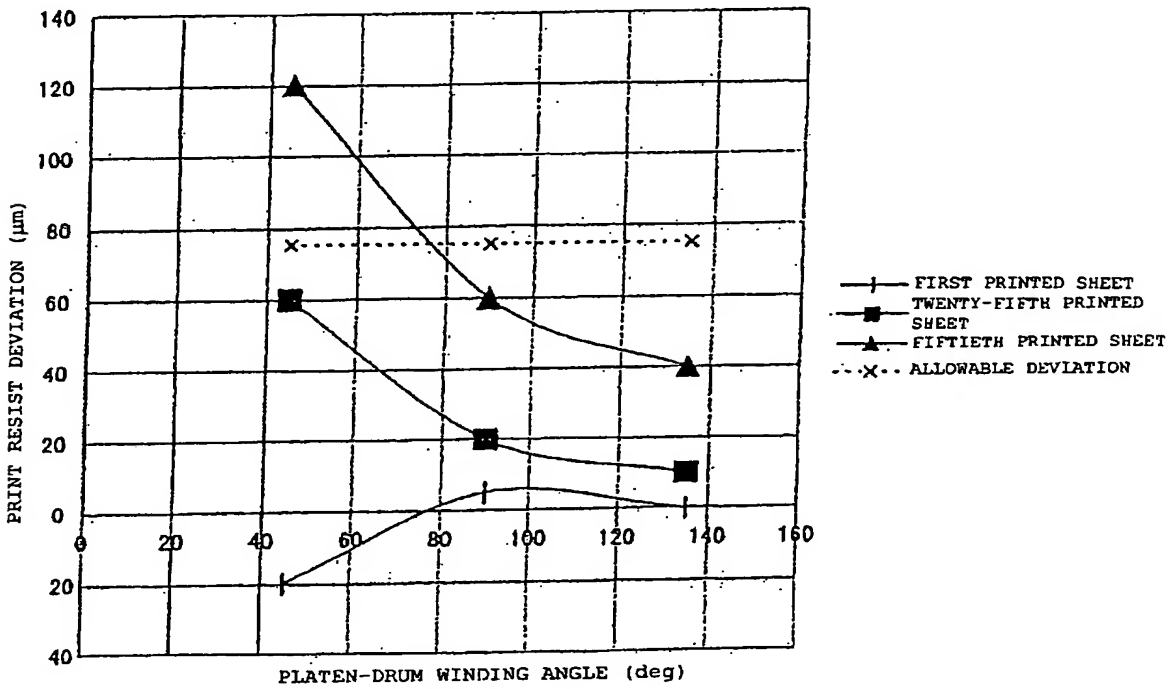


FIG.8

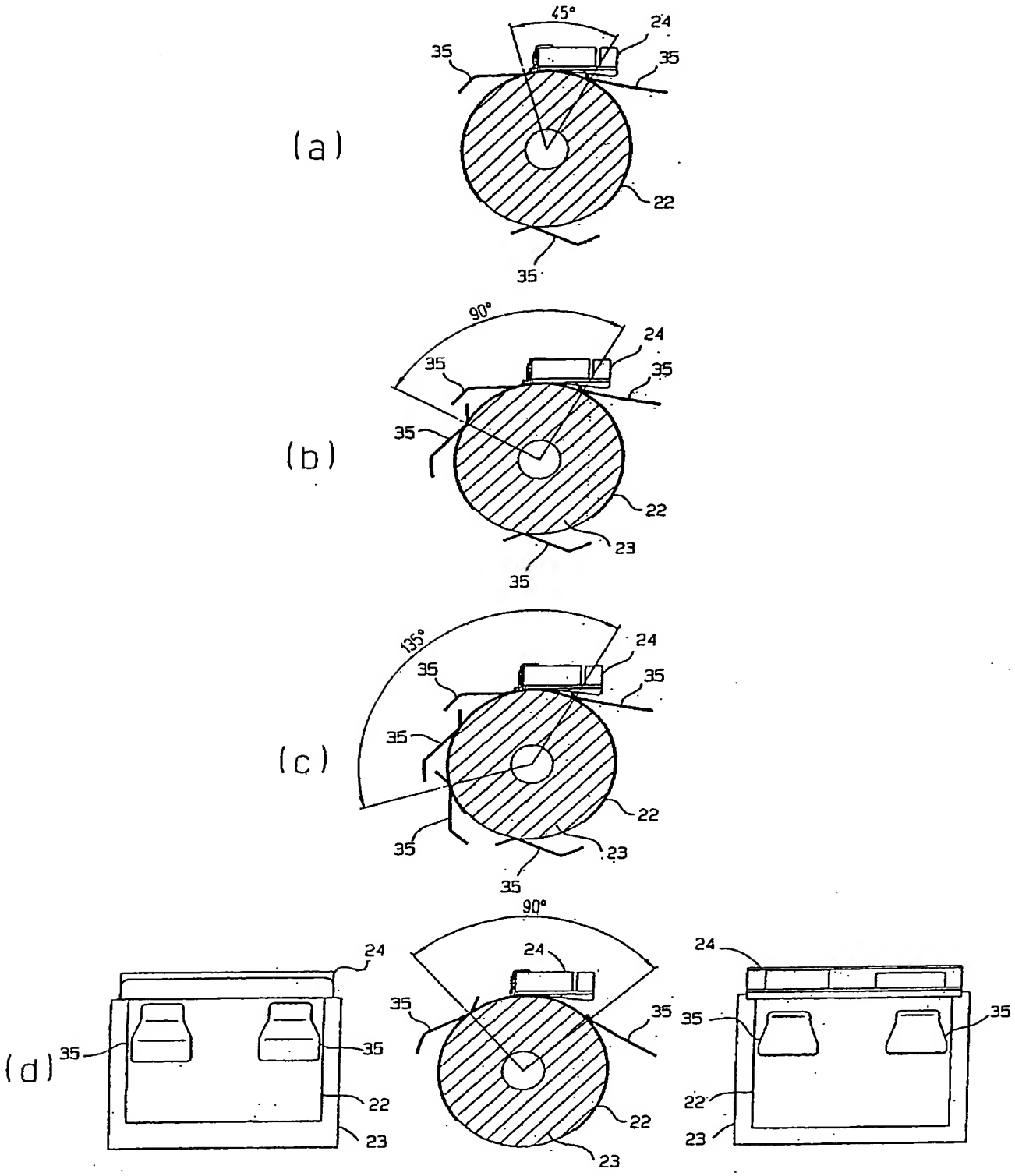

(a)
45°
24
35
35
22
35
(b)
90°
24
35
35
35
22
23
35
(c)
135°
24
35
35
35
22
35
23
35
(d)
90°
24
24
24
35
35
35
35
35
22
22
22
23
23
23

FIG.9

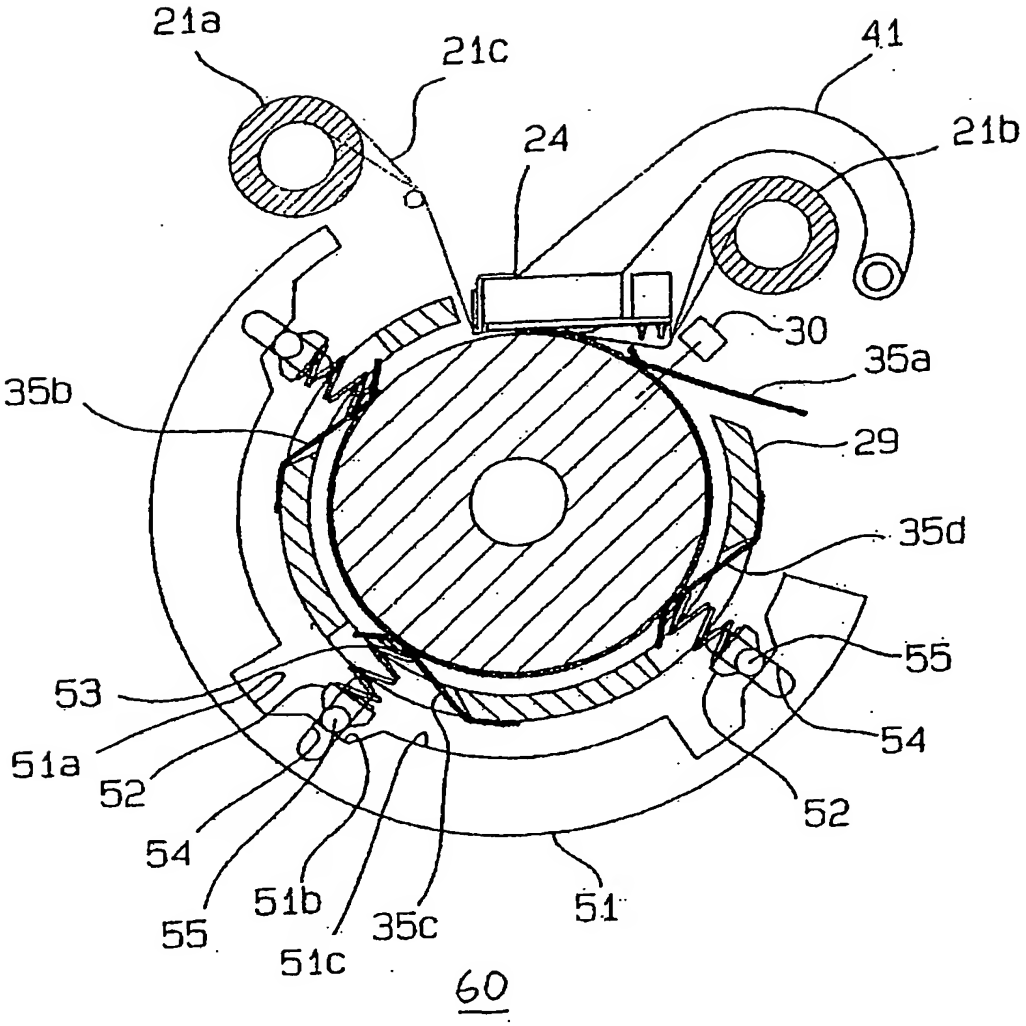

21a
21c
41
24
21b
30
35a
35b
29
35d
55
53
54
51a
52
52
54
55
51b
35c
51
51c
60

FIG.10

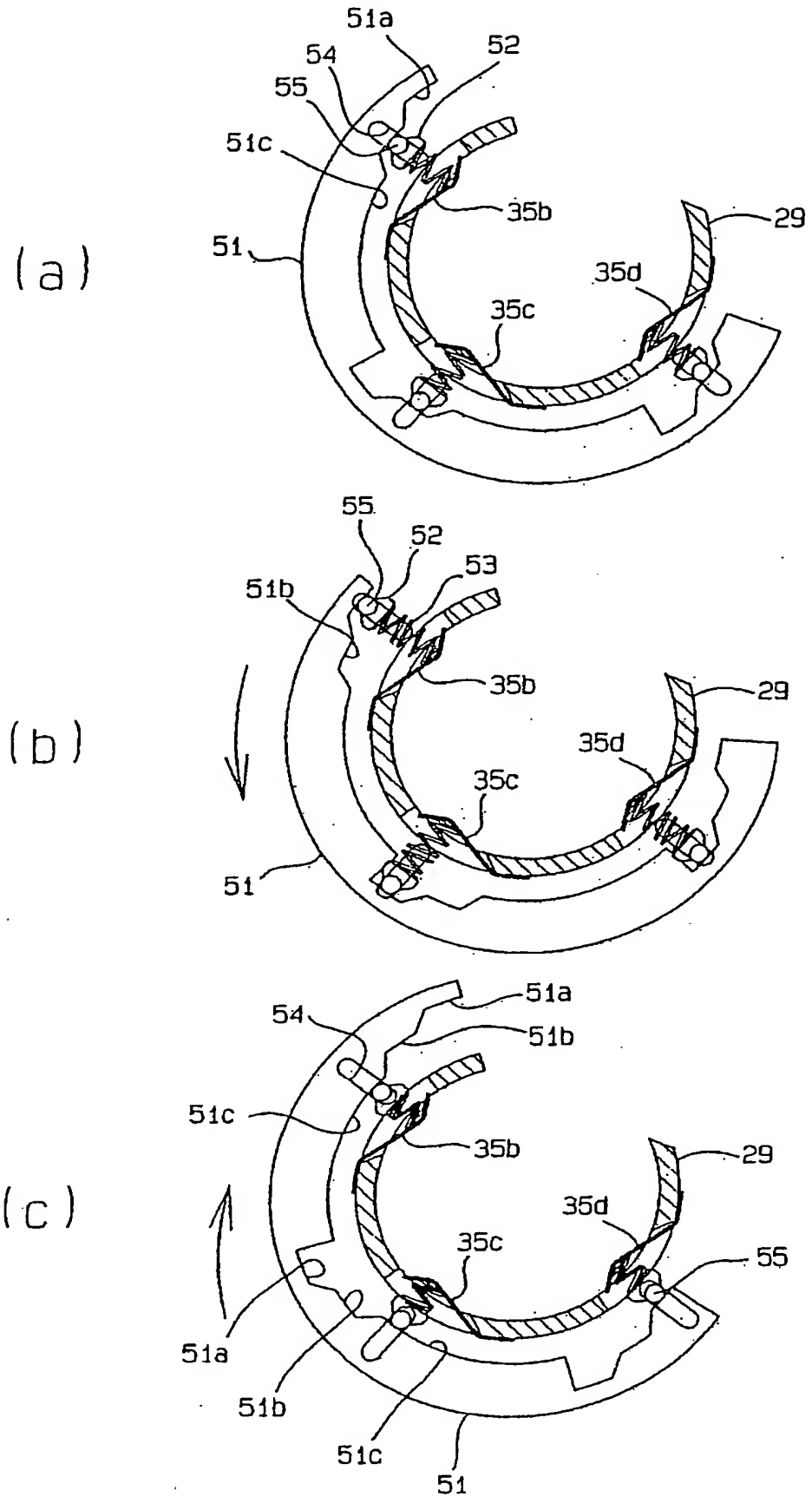

(a)
51a
52
54
55
51c
35b
29
51
35d
35c
(b)
55
52
53
51b
35b
29
35d
35c
51
(c)
51a
54
51b
51c
35b
29
35d
35c
55
51a
51b
51c
51

FIG.11

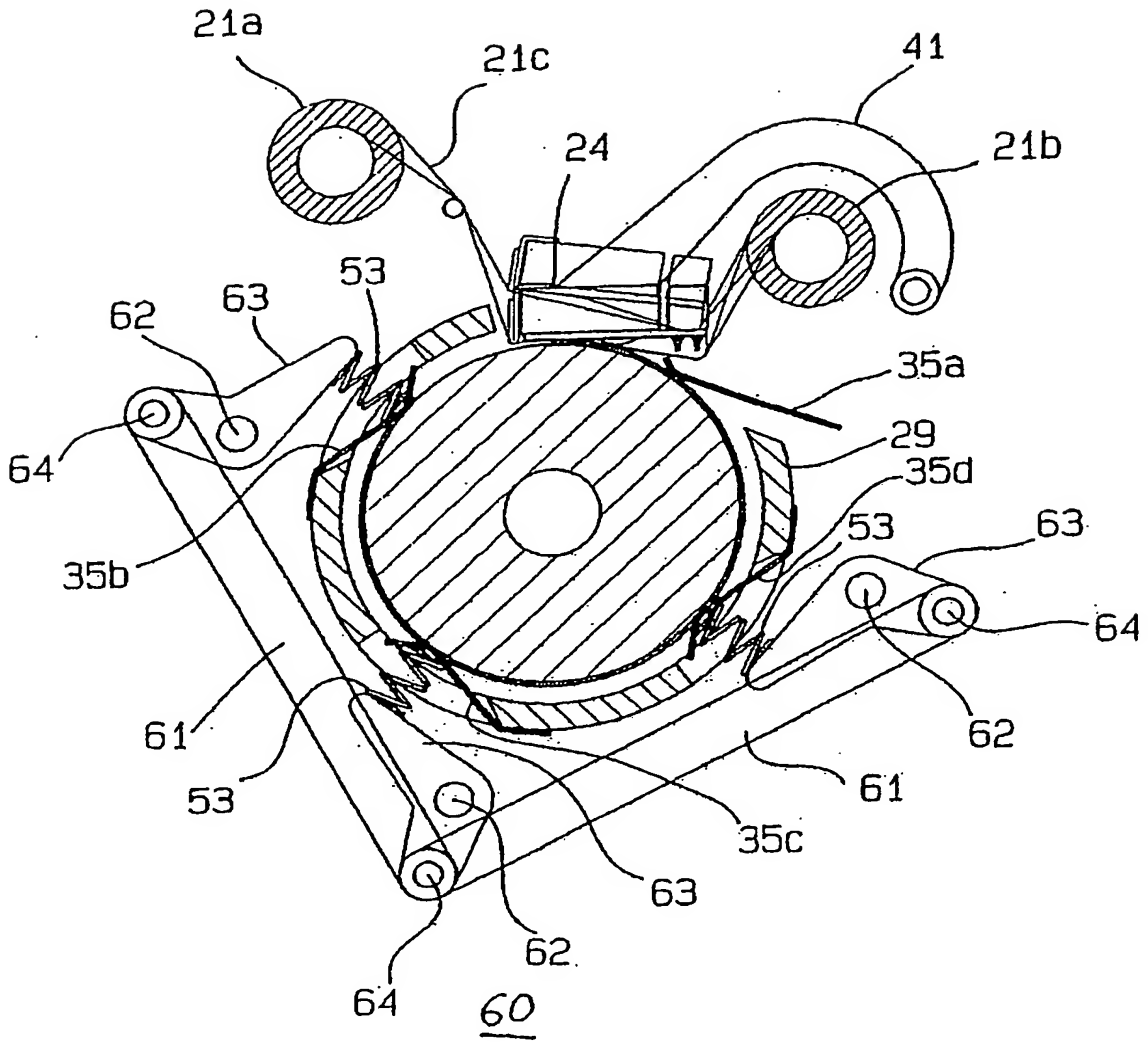

21a
21c
41
24
21b
53
63
62
35a
64
29
35d
35b
53
63
64
61
62
53
61
35c
63
62
64
60

FIG.12

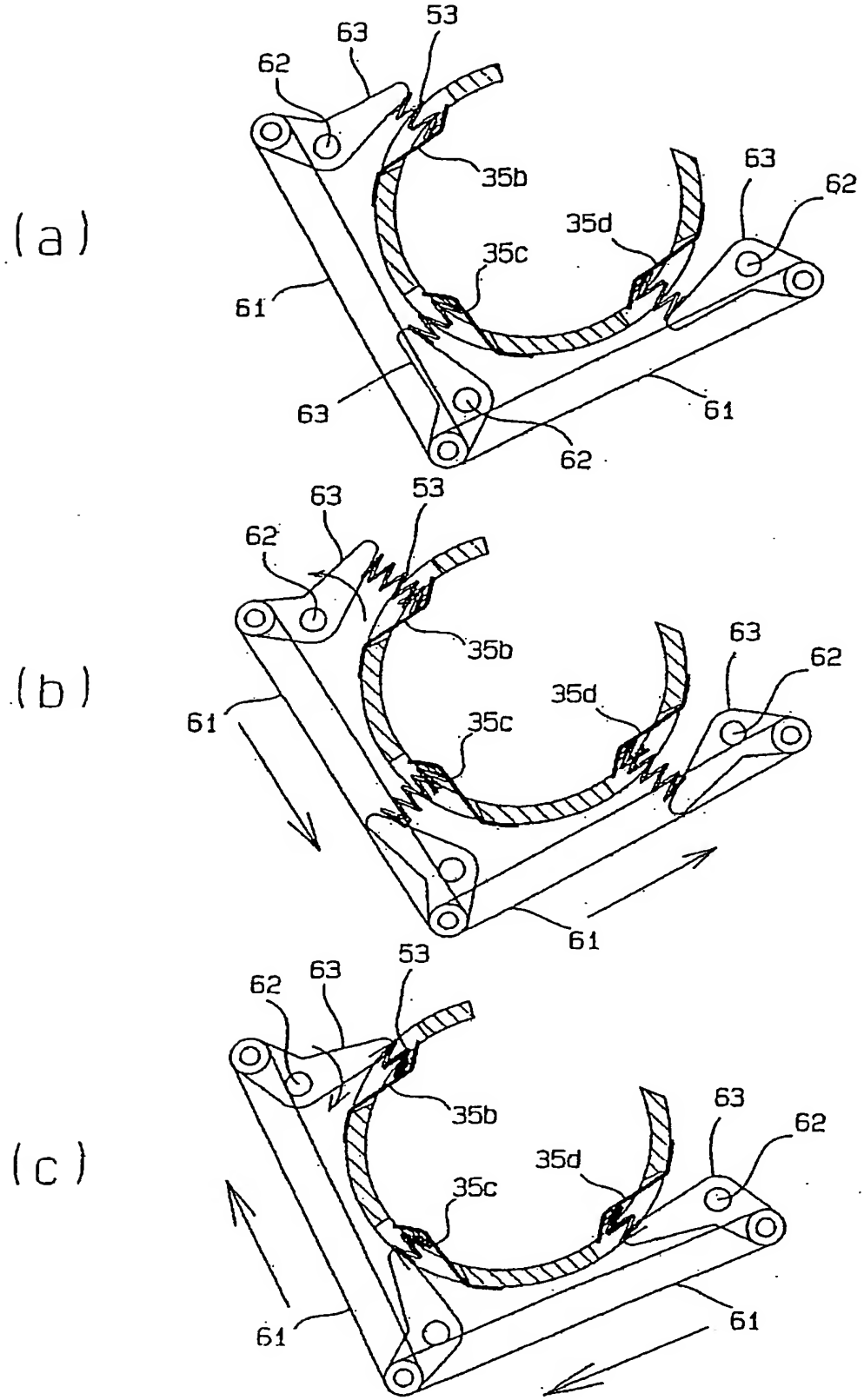

(a)
63
53
62
35b
63
62
35d
35c
61
63
61
62
(b)
63
53
62
35b
63
62
35d
61
35c
61
(c)
62
63
53
35b
63
62
35d
35c
61
61

FIG.13

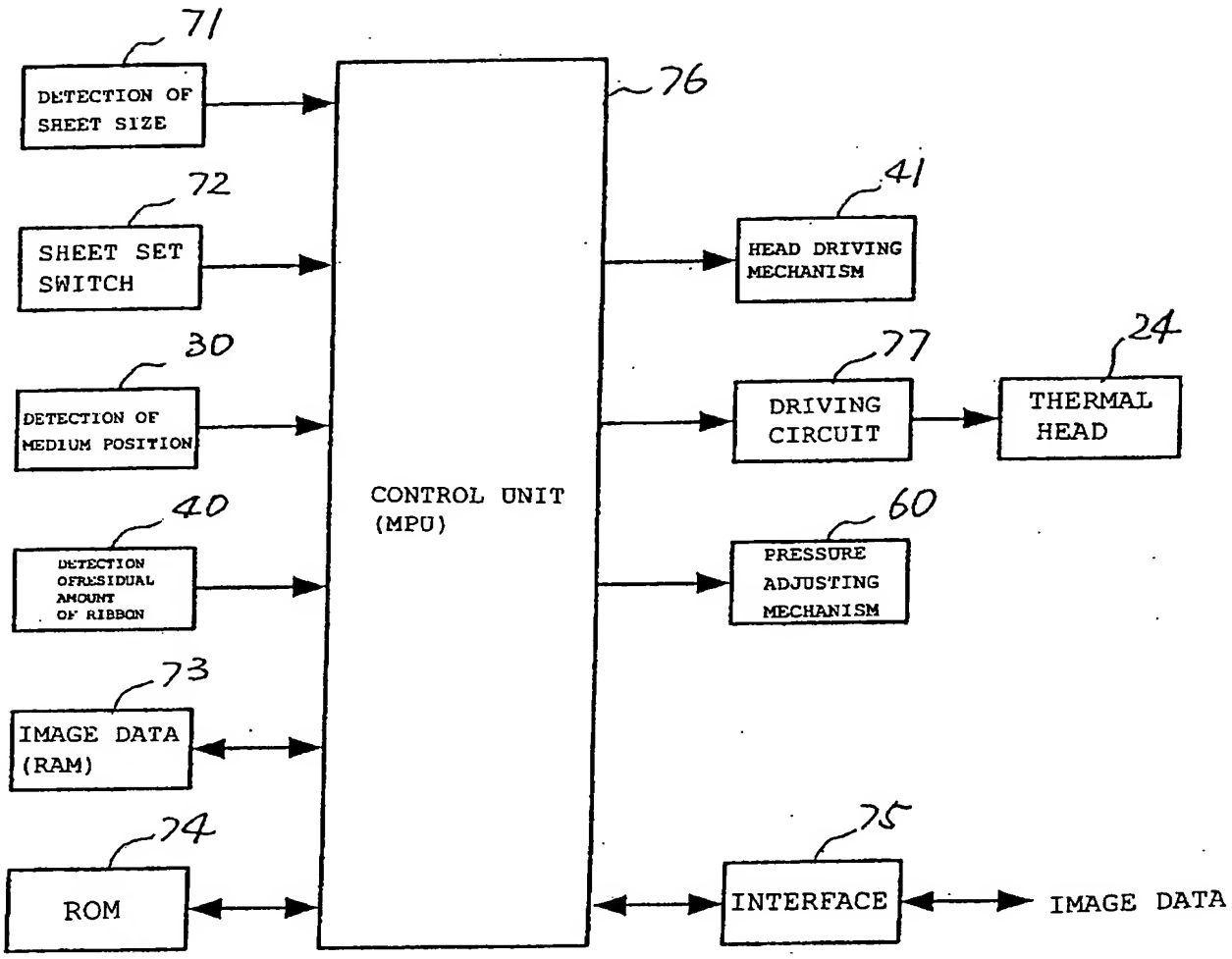

71
DETECTION OF SHEET SIZE
72
SHEET SET SWITCH
30
DETECTION OF MEDIUM POSITION
40
DETECTION OFRESIDUAL AMOUNT OF RIBBON
73
IMAGE DATA (RAM)
74
ROM
CONTROL UNIT (MPU)
76
41
HEAD DRIVING MECHANISM
77
DRIVING CIRCUIT
24
THERMAL HEAD
60
PRESSURE ADJUSTING MECHANISM
75
INTERFACE
IMAGE DATA

FIG.14

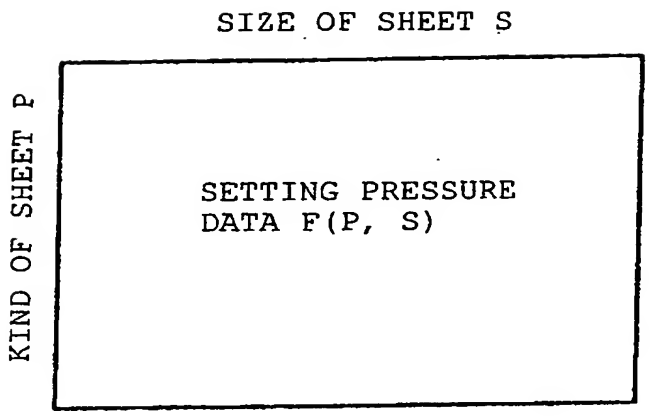


FIG.15

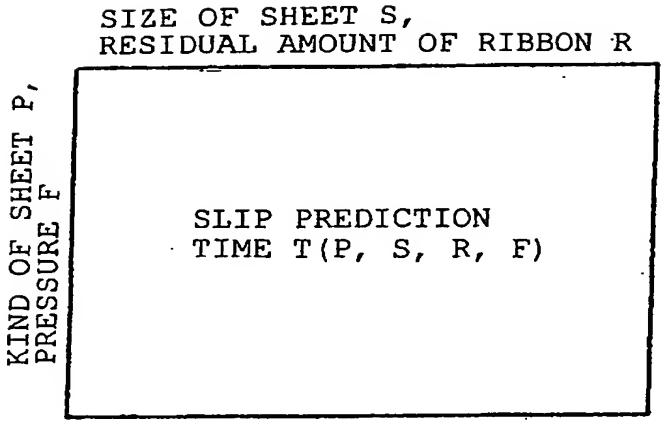

SIZE OF SHEET S,
RESIDUAL AMOUNT OF RIBBON R
KIND OF SHEET P,
PRESSURE F
SLIP PREDICTION
TIME T(P, S, R, F)

FIG.16

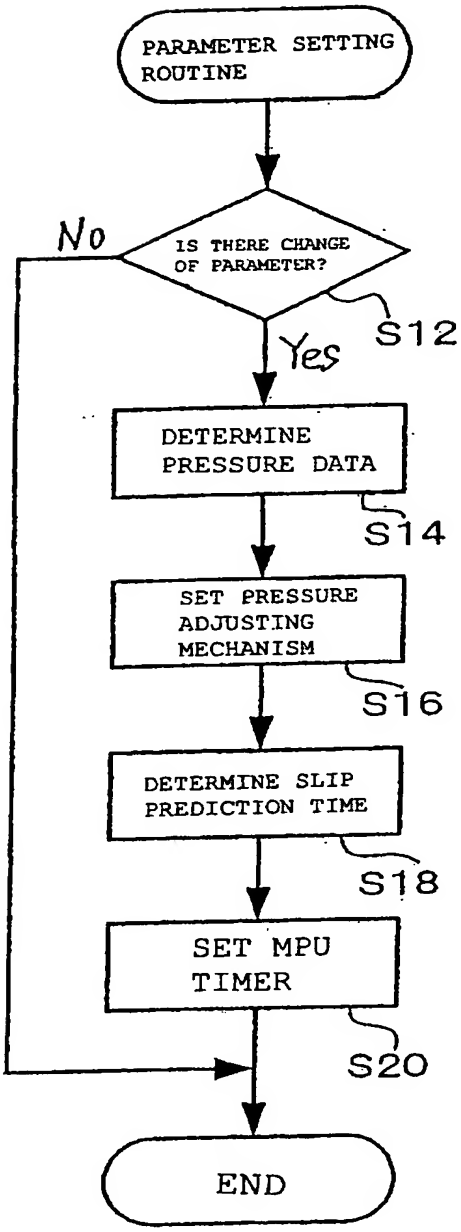

PARAMETER SETTING ROUTINE
No
IS THERE CHANGE OF PARAMETER?
S12
Yes
DETERMINE PRESSURE DATA
S14
SET PRESSURE ADJUSTING MECHANISM
S16
DETERMINE SLIP PREDICTION TIME
S18
SET MPU TIMER
S20
END

FIG.17

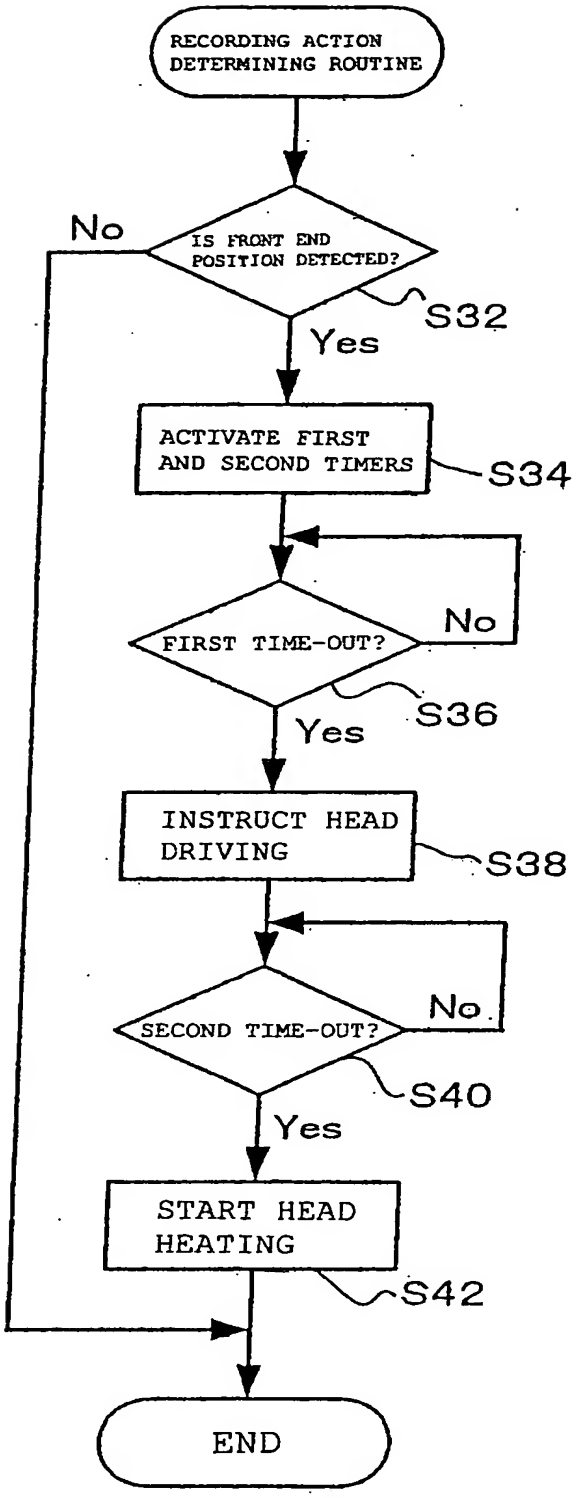
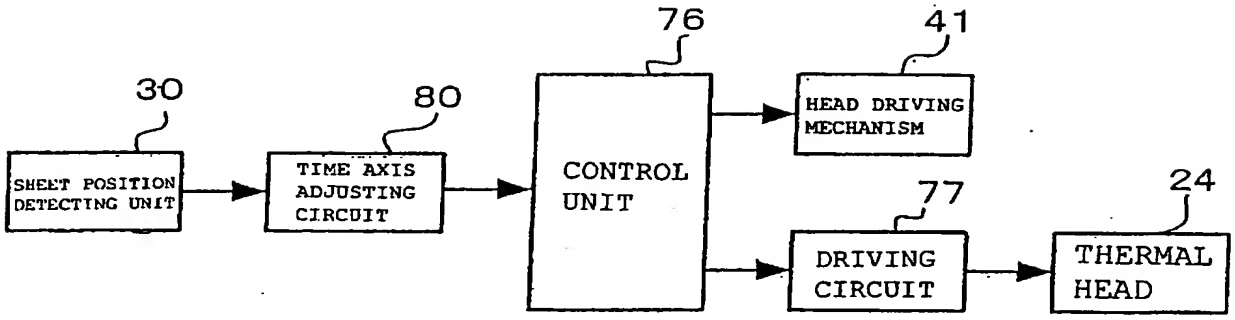

RECORDING ACTION DETERMINING ROUTINE
IS FRONT END POSITION DETECTED?
No
S32
Yes
ACTIVATE FIRST AND SECOND TIMERS
S34
FIRST TIME-OUT?
No
S36
Yes
INSTRUCT HEAD DRIVING
S38
SECOND TIME-OUT?
No
S40
Yes
START HEAD HEATING
S42
END

FIG.18


30
SHEET POSITION DETECTING UNIT
80
TIME AXIS ADJUSTING CIRCUIT
76
CONTROL UNIT
41
HEAD DRIVING MECHANISM
77
DRIVING CIRCUIT
24
THERMAL HEAD